

## REMARKS

### **I. General**

The issues outstanding in the instant application are as follows:

- Claims 30, 32 and 34 are objected to for informalities;
- Claims 1, 4, 12, 13, and 18 stand rejected under 35 U.S.C. 102(e) as anticipated by Carlson, U.S. Pat. No. 6,374,082 (hereinafter *Carlson*);
- Claims 10, 11, 20, 23, 28 and 29 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of Hiramatsu et al., U.S. Pat. No. 6,463,261 (hereinafter *Hiramatsu*);
- Claims 3, 19 and 24 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of Ubowski et al., U.S. Pat. No. 6,346,692 (hereinafter *Ubowski*);
- Claims 5, 6, 21 and 22 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of Blair et al., U.S. Pat. Pub. No. 2002/0173271 (hereinafter *Blair*);
- Claims 7, 14 and 25 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of Petranovich et al., U.S. Pat. No. 5,946,624 (hereinafter *Petranovich*);
- Claims 8, 9, 16, 17, 26 and 27 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson*, in view of *Petranovich*, and further in view of *Blair*;
- Claims 30-33 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson*, in view of Roberts, U.S. Pat. No. 6,006,071 (hereinafter *Roberts*); and
- Claims 34 and 35 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson*, in view of *Hiramatsu* and further in view of *Roberts*.

Applicant hereby traverses the outstanding rejections of the claims, and request reconsideration and withdrawal of the outstanding rejections in light of the amendments and remarks contained herein. New claims 36 and 37 are added above. Support for these claims

can be found at least in lines 13-24 of page 9 of the present specification. Claims 1 and 3-29, 31-33 and 35-37 will be pending upon entry of the above amendments.

## **II. Objections to the Claims**

Claims 30, 32 and 34 are objected to for informalities. The objections raised with respect to claims 30 and 34 are now moot in light of the cancellation of claims 30 and 34. However, limitations similar to those embodied in claims 30 and 34 have been incorporated into independent claims 1 and 20, respectively. These limitations have been structured and phrased in the independent claims in such a manner as to clarify the meaning of the limitations, and thereby avoiding the confusion that led to the objections to claims 30 and 34, and the rejection of claims 30 and 34. Similar amendments and structure changes have been made to claim 32 to address the objections raised by the final Office Action

## **III. Rejection(s) under 35 U.S.C. §102(e)**

Claims 1, 4, 12, 13, and 18 stand rejected under 35 U.S.C. 102(e) as anticipated by *Carlson*.

**Independent claim 1**, as amended, recites:

means for determining the most efficient of:  
scheduling said RF data transfer during said intervals  
that avoid said interference; and  
transmitting said RF data during said data transfer  
intervals and allowing forward error correction of a receiver to  
correct errors in said RF data transfer.

Basis for the limitations added to independent claim 1 can be found in at least lines 13-24 of page 9 of the specification.

The final Office Action admits, in addressing claims 30-35 that *Carlson* (or *Hiramatsu*) fails to teach use of Forward Error Correction (FEC). The final Office Action introduced *Roberts* to address this element. However, neither *Carlson*, *Hiramatsu*, *Roberts* nor any of the other references cited by the final Office Action appear to teach or suggest determining the most efficient of: 1) scheduling RF data transfer during intervals that avoid

said interference, or 2) transmitting RF data and allowing FEC of a receiver to correct errors in the RF data transfer, as claimed in claim 1.

Claim 4 depends directly from independent claim 1, and thus inherits all limitations of claim 1. Thus, claim 4 sets forth features and limitations not taught or suggested by *Carlson* or the other cited references. Therefore, Applicant respectfully asserts that at least for the reasons advanced above in addressing the anticipation rejection of claim 1, claim 4 is also patentable.

**Independent claim 12**, recites “sweeping said filter [used to detect interference] across an RF band of interest” (bracketed clarification added). *Carlson*, in the portion of its specification cited by the final Office Action, only teaches that the Received Signal Strength Indicator (RSSI) signal or a demodulated AM signal received from the receiver is used by the noise detect circuit.

The Response to Arguments section of the final Office Action states that use of “an AM detector or RSSI circuitry to lock on to the envelope of the periodic noise,” as allegedly taught by *Carlson*, anticipates the above recited element of claim 12. However, *Carlson*, at lines 42-61 of column 3, clearly describes the “envelope of the periodic noise” being used to generate a lock detect signal and a sync clock. The lock detect signal informs the microprocessor when a periodic noise signature is present and the sync clock is used to predict when the periodic noise will be present. Thus, the “envelope of the periodic noise” deals with the presence and periodicity of the noise and *Carlson* is silent as to frequency, much less sweeping a filter across a radio frequency band of interest, as claimed in claim 12.

For the foregoing reasons, Applicant respectfully asserts that independent claim 12 is patentable over the 35 U.S.C. §102 rejection of record. Furthermore, there are great differences between independent claim 12 and the prior art of record, and a person of ordinary skill in the art considering the prior art would not find these differences obvious.

Claims 13 and 18 depend from independent claim 12, and thus inherits all limitations of claim 12. Thus, claims 13 and 18 set forth features and limitations not recited by *Carlson*. Therefore, Applicant respectfully asserts that at least for the reasons advanced above in

addressing the anticipation rejection of claim 12, claims 13 and 18 are also patentable over the 35 U.S.C. § 102 rejection of record.

**IV. Rejections under 35 U.S.C. §103(a)**

As noted above, claims 10, 11, 20, 23, 28 and 29 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of *Hiramatsu*; claims 3, 19 and 24 stand rejected as unpatentable over *Carlson* in view of *Ubowski*; claims 5, 6, 21 and 22 stand rejected as unpatentable over *Carlson* in view of *Blair*; claims 7, 14 and 25 stand rejected as unpatentable over *Carlson* in view of *Petranovich*; claims 8, 9, 16, 17, 26 and 27 stand rejected as unpatentable over *Carlson*, in view of *Petranovich*, and further in view of *Blair*; 30-33 stand rejected as unpatentable over *Carlson*, in view of *Roberts*; and claims 34 and 35 stand rejected as unpatentable over *Carlson* and, in view of *Roberts*. Applicant respectfully traverses these rejections.

**A Prima Facie case of obviousness has not been established.**

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. §2143. Without conceding the second criteria, Applicant asserts that the rejection does not satisfy the first and/or third criteria, with respect to various ones of the claims.

**A. The recited combination does not teach or suggest all claimed limitations.**

**Claims 10, 11, 20, 23, 28 and 29** stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of *Hiramatsu*. Claims 10 and 11 depend from independent claim 1. As noted above, in addressing the anticipation rejections of claim 1, claim 1, at least as amended, recites limitations that *Carlson* fails to teach or suggest. The final Office Action does not rely on *Hiramatsu* as teaching these limitations. Whereas claims 10 and 11 inherit all limitations of claim 1, the combination of *Carlson* and *Hiramatsu* does not teach all elements of the claimed invention of claims 10 and 11.

**Independent claim 20** has been amended above to recite:

determining the most efficient of:  
adjusting a time sequence of desired RF data  
transmissions to accommodate said interference profile,  
rescheduling transmissions to avoid said interference; and  
transmitting said RF data and resending said data sent  
during said interference.

Basis for the limitations added to independent claim 20 can found at least in lines 13-24 of page 9 of the specification.

Applicant respectfully asserts that neither *Carlson*, *Hiramatsu*, nor any of the other references cited by the final Office Action appear to teach or suggest determining the most efficient of: 1) adjusting a time sequence of desired RF data transmissions to accommodate an interference profile by rescheduling transmissions to avoid the interference, or 2) transmitting RF data and resending data that was sent during interference, as claimed in independent claim 20, as amended.

Claims 23, 28 and 29 depend directly from independent claim 20 and thus each inherits all limitations of claim 20. Therefore, each of claims 23, 28 and 29 set forth features and limitations not recited by the combination of *Carlson* and *Hiramatsu*. Thus, Applicant respectfully asserts that for at least the reasons advanced above in addressing the rejection of claim 20, claims 23, 28 and 29 are patentable over the 35 U.S.C. §103 rejections of record.

**Claims 3, 19 and 24** stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson* in view of *Uowski*. Claim 3 depends directly from independent claim 1, claim 19 ultimately depends from claim 12, and claim 24 depends directly from independent claim 20. As noted above, in addressing the anticipation rejection of claims 1 and 12, and the obviousness rejection of claim 20, each of claims 1, 12 and 20, at least as amended, recite limitations that *Carlson* fails to teach or suggest. The final Office Action does not rely on *Uowski* as teaching these limitations. Therefore, for the reasons advanced above in addressing the rejections of claims 1, 12 and 20, Applicant respectfully asserts that claims 3, 19 and 24 are patentable over the §103 rejection of record.

Further, as noted, claim 24 depends directly from independent claim 20. When addressing claim 20, the final Office Action admits that *Carlson* fails to teach all limitations of claim 20 and the rejection of claim 24 does not rely on *Ubowski* as teaching the limitations admitted as missing from claim 20. Therefore, Applicant respectfully asserts that claim 24 is further patentable over the §103 rejection of record.

**Claims 5, 6, 21, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* in view of *Blair*. Claims 5 and 6 depend from independent claim 1 and claims 21 and 22 depend from independent claim 20. As noted above, in addressing the anticipation rejections of claim 1 and the obviousness rejection of claim 20, each of claims 1 and 20, at least as amended, recite limitations that *Carlson* fails to teach or suggest. The final Office Action does not rely on *Blair* as teaching these limitations. Whereas claims 5 and 6 inherit all limitations of claim 1 and claims 21 and 22 inherit all limitations of claim 20, the combination of references does not teach all elements of the claimed invention of claims 5, 6, 21 or 22.

Further, as noted, claims 21 and 22 depend directly from independent claim 20. When addressing claim 20, the final Office Action admits that *Carlson* fails to teach all limitations of claim 20 and the rejection of claims 21 and 22 do not rely on *Blair* as teaching the limitations admitted as missing from claim 20. Therefore, Applicant respectfully asserts that claims 21 and 22 are further patentable over the §103 rejection of record.

Regardless, Applicant respectfully contends, despite the allegations of the final Office Action, that *Blair* fails to teach or suggest modulation of an RF data transfer changed to accommodate time sequence shifting, particularly where the time sequence shifting is carried out to avoid interference. Further, Applicant respectfully contends, despite the allegations of the final Office Action, that *Blair* fails to teach or suggest adjusting a code rate of an RF data transfer to accommodate time sequence shifting carried out to avoid interference. In paragraph 47, *Blair* teaches that the modulation and symbol rate are selected based on bandwidth, which is selected based on priority of the data.

The Response to Arguments section of the final Office Action states “It is held that it would be obvious to one skilled in the art to apply the modulation and code rate adjustment of Blair in an interference avoidance environment.” Thus, Applicant assumes the final Office

Action is admitting that *Blair* does not teach or suggest adjusting the modulation and/or code rate of an RF data transfer to accommodate time sequence shifting carried out to avoid interference. Further, in light of the Examiner's statement that "it would be obvious to one skilled in the art to apply the modulation and code rate adjustment of Blair in an interference avoidance environment," Applicant believes that the Examiner has either relied on his own personal knowledge, or taken Official Notice, with respect to this matter. Under Rule 37 C.F.R. §1.104(d)(2), the Examiner is hereby requested to provide and make of record an affidavit setting forth his data as specifically as possible for the assertion. Alternatively, under M.P.E.P. §2144.03, the Examiner is hereby requested to cite a reference in support of the assertion. Otherwise the rejection of claims 5,6,21 and 22 should be withdrawn.

Regardless, Applicant respectfully maintains that *Blair* fails to teach or suggest changing a modulation or adjusting a code rate of an RF data transfer to accommodate time sequence shifting, as claimed in various ones of claims 5, 6, 21 and 22.

**Claims 7, 14, 15, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* in view of *Petranovich*. Claim 7 depends from independent claim 1, claims 14 and 15 depend from independent claim 12, and claim 25 depends from independent claim 20. As noted above, in addressing the anticipation rejections of claims 1 and 12, and the obviousness rejection of claim 20, each of claims 1, 12 and 20, at least as amended, recite limitations that *Carlson* fails to teach or suggest. The final Office Action does not rely on *Petranovich* as teaching these limitations. Whereas claim 7 inherits all limitations of claim 1, claims 14 and 15 inherit all limitations of claim 12, and claim 25 inherits all limitations of claim 20, the combination of references does not teach all elements of the claimed invention of claims 7, 14, 15 or 25.

Further, as noted, claim 25 depends directly from independent claim 20. When addressing claim 20, the final Office Action admits that *Carlson* fails to teach all limitations of claim 20 and the rejection of claim 25 does not rely on *Petranovich* as teaching the limitations admitted as missing from claim 20. Therefore, Applicant respectfully asserts that claim 25 is further patentable over the §103 rejection of record.

Regardless, claim 7 recites "skipping at least one time slot in a sequence of time slots of said data transfer to avoid said interference," and claims 14 and 15 recite "eliminating at

least one of said time slots for the duration of said interference” (emphasis added). In FIGURE 6, *Petranovich* clearly shows “time sharing of the limited frequencies available” (column 5, lines 21 and 22). Therefore, Applicant maintains that *Petranovich* does not show skipping a time slot, the time slots of *Petranovich* are just used by difference customers. Therefore, *Petranovich* clearly does not show eliminating a time slot, and in fact, might be seen as teaching away from eliminating a time slot, in that all time slots in *Petranovich* are used by somebody. Thus, no time slots in *Petranovich* are skipped to avoid interference as claimed in claim 7, or eliminated for the duration of interference as claimed in claims 14, 15 and 25.

**Claims 8, 9, 16, 17, 26, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Carlson* in view of *Petranovich*, as applied to claims 7, 14, 15, and 25, and further in view of *Blair*. Claims 8 and 9 depend from independent claim 1, claims 16 and 17 depend from independent claim 12, and claims 26 and 27 depend from independent claim 20. As noted above, in addressing the anticipation rejections of claims 1, 12 and 20, each of claims 1, 12 and 20, as amended, recite limitations that *Carlson* fails to teach or suggest. The final Office Action does not rely on *Petranovich* or *Blair* as teaching these limitations. Furthermore, claims 8 and 9 depend from claim 7, claims 16 and 17 depend from claim 15, and claims 26 and 27 depend from claim 25. As noted above, in addressing the obviousness rejections of claims 7, 15 and 25, each of claims 7, 15 and 25, recite limitations that the combination of *Carlson* and *Petranovich* fails to teach or suggest. The final Office Action does not rely on *Blair* as teaching these limitations. Whereas claims 8 and 9 inherit all limitations of claims 1 and 7, claims 16 and 17 inherit all limitations of claims 12 and 15, and claims 26 and 27 inherit all limitations of claims 20 and 25, the combination of references does not teach all elements of the claimed invention of claims 8, 9, 16, 17, 26 or 27.

Further, as noted, claims 26 and 27 ultimately depend from independent claim 20. When addressing claim 20, the final Office Action admits that *Carlson* fails to teach all limitations of claim 20 and the rejection of claims 26 and 27 do not rely on *Petranovich* or *Blair* as teaching the limitations admitted as missing from claim 20. Therefore, Applicant respectfully asserts that claims 26 and 27 are further patentable over the §103 rejection of record.



Again in addressing Applicant's earlier arguments regarding *Blair* failing to teach or suggest changing a modulation, and/or adjusting a code rate, of an RF data transfer to accommodate skipping at least one time slot, or the like, the final Office Action states: "It is held that it would be obvious to one skilled in the art to apply the modulation and code rate adjustment of Blair in an interference avoidance environment." Thus, Applicant again requests that, under Rule 37 C.F.R. §1.104(d)(2), the Examiner provide and make of record an affidavit setting forth his data as specifically as possible for the assertion, or under M.P.E.P. §2144.03, the Examiner cite a reference in support of the assertion. Otherwise the rejection of claims 8, 9 16, 17, 26 and 27 should be withdrawn.

Regardless, Applicant respectfully maintains that *Blair* fails to teach or suggest changing a modulation or adjusting a code rate of an RF data transfer to accommodate time skipping of a time slot, as claimed in various ones of claims 8, 9 16, 17, 26 and 27.

**Claim 31- 33** stand rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson*, in view of *Roberts* and **claim 35** stands rejected under 35 U.S.C. §103(a) as unpatentable over *Carlson*, in view of *Hiramatsu* and further in view of *Roberts*. Claim 31 depends directly from independent claim 1, claims 32 and 33 ultimately depend from independent claim 12, and claim 35 depends directly from independent claim 20. Thus, each of claims 31-33 and 35 inherits all limitations of their respective base claims, claims 1, 12 or 20. As noted above, *Carlson* or the combination of *Carlson* and *Hiramatsu* fails to teach or suggest all limitations of independent claims 1, 12 and/or 20. When addressing claim 20, the final Office Action does not rely on *Roberts* as teaching these limitations. Therefore, for at least the reasons advanced above in addressing the anticipation or obviousness rejections of independent claims 1, 12 and 20, each of claims 31-33 and 35 sets forth features and limitations not recited by the respective cited combinations of *Carlson* and *Roberts*, or *Carlson*, *Hiramatsu*, and *Roberts*. Hence, Applicant respectfully asserts that for the above reasons claims 31-33 and 35 are patentable over the 35 U.S.C. § 103(a) rejection of record.

Additionally, claim 32, as amended, recites:

determining the most efficient of:  
    said adjusting time sequences of desired RF  
transmissions to accommodate said interference profile;  
    allowing forward error correction of a receiver to

correct errors in said RF data transfer; and  
resending said data sent during said interference.

Basis for the limitations added to claim 32 can found at least in lines 13-24 of page 9 of the specification. As also noted above, the final Office Action admits, in addressing claims 30-35, that *Carlson* (or *Hiramatsu*) fails to teach use of Forward Error Correction (FEC). The final Office Action introduced *Roberts* to address this element. However, neither *Carlson*, *Hiramatsu*, *Roberts* nor any of the other references cited by the final Office Action appear to teach or suggest determining the most efficient of: 1) adjusting time sequences of desired RF transmissions to accommodate an interference profile, 2) transmitting data and allowing FEC of a receiver to correct errors in the RF data transferred, or 3) transmitting data and resending said data sent during said interference, as claimed in claim 32. New claims 36 and 37 are patentable for the same reasons. Additionally claim 33 depends directly from claim 32, and thus inherits claim 32's limitations. Therefore, claim 33 is also further patentable for the same reasons.

For at least the foregoing reasons, Applicant respectfully asserts that claims 3, 5-11, 14-17 and 19-29 and 31-33 are patentable over the 35 U.S.C. § 103(a) rejections of record and new claims 35 and 36 are patentable.

**B. The Office Action does not provide the requisite motivation.**

The motivations provided in the final Office Action for making the various combination are the same motivations provided in the previous non-final Office Action in this case. Applicant respectfully maintains that the various motivations provided for combining *Carlson* and various other references of record are improper, as the motivation to combine references must establish the desirability for making the respective combination.

Specifically, whereas neither the *Carlson* reference nor the *Ubowski* reference teach avoiding radar interference, Applicant respectfully asserts that the motivation provided by the final Office Action is merely a statement that the references can be combined, does not state any desirability for combining the references and ignores the teaching of the references. For example, *Ubowski* does not characterize radar as an interference, but rather as a beneficial use of microwaves.

As noted above *Blair* teaches that the modulation and symbol rate are selected based on bandwidth, which is selected based on priority of the data. Therefore, Applicant respectfully contends that nothing in *Blair* would suggest motivation for modifying *Carlson* to change or adjust a modulation or code rate of an RF data transfer, particularly to accommodate time sequence shifting, absent the application of impermissible hindsight, as *Blair* only teaches selection of a modulation or symbol rate based on bandwidth.

Co-channel interference is only avoided in *Petranovich* due to time sharing of a frequency by different users. Therefore, the motivation provided by the final Office Action is misleading in that *Petranovich* does not teach skipping any time slots. Further the motivation provided by the final Office Action does not present any reason why it is desirable to modify *Carlson* to skip time slots as *Petranovich* does not skip any time slots. Therefore, Applicant respectfully asserts that the motivation provided by the final Office Action for using *Petranovich* is merely a statement that the references can be combined, does not state any desirability for combining the references, and ignores the teaching of the references. Further, as noted above, *Petranovich* might be seen as teaching away from eliminating a time slot, in that all time slots in *Petranovich* are used by some user. Therefore, the motivation provided by the final Office Action to combine *Carlson* and *Petranovich* is improper, at least as to claims 14 and 25. (See M.P.E.P. §2145.)

Whereas, no valid suggestion has been made as to why a combination of *Carlson* and respective ones of the cited references is desirable, Applicant respectfully asserts that, the rejection of claims 3, 5-11, 14-17, 19, 21, 22, 24-27 and 29 should be withdrawn.

## V. Conclusion

In view of the above amendments and for all the reasons given above, Applicant submits that the pending claims, at least as amended, distinguish over the prior art under 35 U.S.C. §§102 and 103. Accordingly, Applicant submits that this application is in full condition for allowance.


Applicant believes no additional fees, beyond the RCE and Extension of Time Fess dealt with in the accompanying RCE Request, Petition for Extension of Time and Transmittal(s), are due. However, if any additional fee is due, please charge Deposit Account

No. 06-2380, under Order No. 60783/P001US/10102072 from which the undersigned is authorized to draw.

Applicant respectfully requests that the Examiner call the below listed attorney if the Examiner believes that the attorney can be helpful in resolving any remaining issues or can otherwise be helpful in expediting prosecution of the present application.

Dated: October 27, 2005

Respectfully submitted,

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